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ARBORICULTURAL IMPLICATIONS ASSESSMENT FOR PROPOSED REDEVELOPMENT

AT

NOS. 1-7 MILL LANE
LONDON
NW6

by

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BSc(Hons) M.I.C.For. M.Arbor.A.

Our ref: J 38.54
22nd July 2008

CONTENTS

1. INTRODUCTION

1.1 Broad Oak Tree Consultants Ltd. have received instructions through SLLB Architects to undertake an inspection of trees located on and immediately adjacent to the site referred to as Nos. 1-7 Mill Lane, London, NW6. The purpose of the inspection was to produce a base inventory of the tree stock, advise on any safety issues and to produce an Arboricultural Implications Assessment of redevelopment proposals.

1.2 The proposals are for the demolition of the existing derelict three-storey building and the construction of one six-storey block of apartments and a two-storey building with an underground car park. To the rear will be an open area of amenity/wildlife ground with restricted access. Details of the proposals will have been submitted by others.

1.3 At the time of reporting certain trees on and adjoining the site are understood to be covered by Tree Preservation Order no. C695, 2007 placed in August 2007. Two further trees in close proximity to the site are also presumed to be covered by a TPO, the details of which are not known.

2. GENERAL SITE DESCRIPTION

2.1 The site forms an elongated triangle shape located on the north side of Mill Lane, with its narrow far northern end bordering Minster Road. To the east ground levels fall away sharply over the southern two-thirds of the site to retaining walls and railway lines beyond. The northern third has retaining walls marking the eastern edge. To the west the site is bounded by gardens of residential properties.

2.2 Within the site to the south west corner is a three-storey derelict residential property with partial basement. Further houses are believed to have previously existed to the east. The ground over much of the site is heavily disturbed and has been worked by machines. Within rear gardens to the west are various mature/maturing trees. Within the site along the eastern boundary are belts of drawn up, previously crowded broadleaved trees.

3. SCOPE OF TREE SURVEY

3.1 All trees over 75mm. in diameter at 1.5m. above ground level and located within or immediately adjacent to the site were included in the tree survey.

4. DATA COLLECTION

4.1 All trees were inspected from the ground and no climbing or boring was undertaken. Only those trees within the site boundary could be basally inspected, with the structural integrity of the tree located outside the site unconfirmed. Each tree was inspected to the requirements of Section 4.2.6 of BS 5837:2005 "Trees in Relation to Construction – Recommendations".

4.2 The tree survey followed the numbered sequence from 1–23 inclusive. Tree numbers, together with BS recommended colour coding of condition, have been added to the Tree Constraints Plan, our drawing no. J 38.54/01 in Appendix 2. This drawing also includes actual crown spreads based on four compass points.

4.3 The following categories of information were obtained for each tree. A separate detailed tree survey sheet is attached in Appendix 1, together with comprehensive explanatory sheets which cover the details of the categories listed below.

(1) Tree reference number
(2) Species
(3) Height in metres
(4) Stem count
(5) Stem diameter in millimetres
(6) Branch spread in metres
(7) Age class
(8) Height of crown clearance in metres
(9) Physiological condition
(10) Estimated remaining contribution in years
(11) Category grading
(12) Structural condition
(13) Preliminary management recommendations

4.4 Within the assessment of physiological condition and remaining contribution, a visual inspection of each tree was undertaken to assess the crown and stem for any weak structures, deadwood, hollows, forks or other defects that might affect its stability and safety. The base of each tree was also visually inspected, together with tapping and probing, to search for signs of root lifting, bark death or decay. Where stems were heavily ivy clad, no full assessment of structural integrity could be undertaken. Clearance of the ivy would be necessary for confirmation of tree condition.

5. RISK ASSESSMENT - INFORMATIVES

5.1 Although the potential risk to someone passing beneath a tree when the tree or part of it fails is relatively remote, the risk is present. This increases significantly in areas of consistent and regular usage on a year round basis, such as footpaths, gardens and roadways. Where static structures exist, the risks become constant and an assessment is made as to whether complete or partial failure of a tree could potentially cause physical damage to such structures.

5.2 Within the scope of any tree survey it is a fact that not all risks of stem or crown failure can be covered, particularly in relation to freak occurrences of weather when even healthy trees can suffer stem snap or windblow. There is also a well known propensity for mature trees to occasionally shed limbs for no discernible reason, even on calm days. Although relatively rare, limbs may occasionally be shed and this should be acknowledged as a risk that cannot entirely be mitigated.

6. RESULTS OF TREE INSPECTIONS

6.1 A total of 23 individual trees and groups were inspected, ranging from young sycamores less than 20 years of age through to mature limes in excess of 100 years old.

6.2 The trees along the western boundary within the rear gardens have been planted as features and possibly to screen some of the views across to the railway. These are relatively large trees forming well defined crown masses.

6.3 Within the site the majority of the trees along the eastern boundary in Groups 20 and 22 are remnants of a wooded site that is understood to have been cleared. For the most part these trees are heavily crowded, poorly formed with drawn up narrow crowns and are asymmetric towards the railway lines. There will be ever increasing risks of these trees failing on to the railway and they do not have a long term future.

6.4 Whilst a number of the trees along the eastern boundary are believed to be TPO'd, it is unclear how they are defined by the Council from the general mass of trees.

6.5 Of the trees inspected, the following is a breakdown of the various numbers of trees in each BS category.

BS category	Tree no.	Sub total
A	2	1
B	1, 3, 4, 5, 6, 7, 21	7
C	8, 9, 10, 11, 12, 13, 14, 15, 17, 19, G20, G22, G23	13
R	16, G18	2
	TOTAL	**23**

6.6 ***Interpretation of table***

Category A Retention most desirable. Of high quality and value and in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested).

Category B Retention desirable. Of moderate quality and value and in such a condition as to make a significant contribution (a minimum of 20 years is suggested).

Category C Could be retained – of low quality and value. Poor crown form, heavily asymmetric, large numbers of similar species/size. Currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested) or young trees with a stem diameter below 150mm.

Category R Trees for removal. Dead/dying/dangerous trees due to structural defects, fungal decay or root plate uplift. Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management.

ARBORICULTURAL IMPLICATIONS ASSESSMENT

7. REDEVELOPMENT PROPOSALS

7.1 The proposals are for the demolition of the existing derelict three-storey building and the construction of one six-storey block of apartments and a two-storey building with an underground car park. To the rear will be an open area of amenity/wildlife ground with restricted access. Details of the proposals will have been submitted by others.

7.2 The proposed site layout has been provided by SLLB Architects in Autocad format and forms the base of the BOTC Tree Protection Plan, drawing no. J 38.54/02 Rev B in Appendix 3. This plan indicates trees for removal and proposals for the protection of retained trees.

8. TREES REQUIRING REMOVAL ON SAFETY GROUNDS

8.1 The tree inspections have identified the following trees as being in a potentially dangerous condition or having a very limited safe lifespan. Their removal is recommended even in the absence of redevelopment proposals.

Tree no.	Species	Comments
16	Sycamore	Weak stem join at 1.1m. liable to fail.
G18	Prunus spp.	Dying group of low quality trees.

8.2 These trees are indicated on the Tree Protection Plan with red dashed crown outlines.

9. IMPACT OF REDEVELOPMENT ON TREE RETENTION

9.1 In considering the feasibility of tree retention within any site, account has to be taken of the areas of undisturbed roots that will be retained around each tree. Based on the stem diameter of the tree and the formula contained in Table 2 of BS 5837:2005, an area of undisturbed rooting necessary for the survival and longevity of each tree can be calculated. The following table indicates the minimum required root protection areas for trees indicated as being retained on the supplied drawings. The table does not include trees classified as condition R, which require removal within the next 10 years on safety grounds.

9.2 The table also includes an assessment of the proximity of any proposed ground disturbance to trees and whether this separation would be acceptable based on the calculated root protection areas.

Tree ref. no.	TPO no.	Species	Category grading	BS calculated minimum root protection radial distance (m.)	Distance to disturbance (m.)	Type of disturbance	Comments
1	?	Tree of Heaven	B	6.6	2.6	Recycling area	Existing wall at 1.2m.
2	?	Lime	A	9.6	3.6	Underground car park	Existing building at 2.2m.
3	T5	Lime	B	6	12.4	Underground car park	No impact
4	T4	Lime	B	5.4	15.6	Underground car park	No impact
5	T3	Copper beech	B	9.6	20+	Underground car park	No impact
6	T2	Lime	B	9.6	20+	Patio	No impact
7	T1	Lime	B	6	20+	Patio	No impact
8		Holly	C	1.5	20+	Patio	No impact
9		Sycamore	C	10	20+	Patio	No impact
10		Pear	C	3.6	20+	Patio	No impact
11		Pear	C	1.8	20+	Patio	No impact
12		Sycamore	C	2	20+	Patio	No impact
13		Sycamore	C	2.4	20+	Patio	No impact
14		Sycamore	C	2.4	20+	Patio	No impact
15		Sycamore	C	7	20+	Patio	No impact
16		Sycamore	R	-	-		
17		Sycamore	C	3.4	20+	Patio	No impact
G18	G1	Prunus spp.	R	-	-		
19	G1	Sycamore	C	2.6	20+	Patio	No impact
G20	G1	Sycamore + Prunus	C	<3.6	20+	Building	No impact
21	G1	Sycamore	B	11	4.2	Building	Req. removal
G22	G1	Sycamore + Birch	C	<3.6	0+	Building	Req. removal
G23	G1	Ash/willow	C	<1.5	4+	Building	No impact

9.3 **Interpretation of table**

Existing building/wall The presence of existing built features with foundations such as the boundary wall and semi-basement to the existing house will have severely restricted root development within the site. It is highly unlikely that the theoretical RPAs shown reflect actual rooting presence. The impact of proposals is therefore likely to be limited.

No impact Sufficient space exists for the safe retention of the required root area.

Req. removal Removal necessary for development to proceed.

10. TREES FOR REMOVAL TO FACILITATE DEVELOPMENT

10.1 The following is a summary of the trees that would require removal or would be recommended for removal to facilitate the construction and provide space for higher quality new landscaping.

Tree no.	TPO no.	Species	BS category	Comments
21	G1	Sycamore	B	Self-seeded multi-stemmed tree. Species commonly considered an invasive weed.
G22	G1	Sycamore + Birch	C	Dense belt of drawn up asymmetric trees with failure potential towards railway.

10.2 These are indicated with blue dashed crown outlines on the attached Tree Protection Plan.

10.3 A total of one individual tree and one linear group will require removal. Whilst tree no. 21 is of some visual merit, it is not an indigenous species and has issues associated with proximity to the railway due to the size and density of its leaves. The belt of naturally regenerated trees forming G22 are at risk of failure on to the railway and do not have a long term future. Whilst both are TPO'd, the TPO is presumed to have resulted as a reaction to site clearance rather than protecting good quality trees for the public amenity benefit such as those within the rear gardens to the west.

11. TREE SURGERY RECOMMENDATIONS

11.1 The following tree works are recommended should the development proceed to provide vehicle building clearance and address tree safety issues.

Tree no.	Species	Works required
2	Lime	Trim back outer crown towards boundary to provide 1.5m. clearance around proposed building.

12. TREE PROTECTION MEASURES – FENCING

12.1 ***Location of fencing***

12.1.1 The Tree Protection Plan indicates the proposed location of protective fencing based on the calculated tree protection areas and space available.

12.2 ***Design of fencing***

12.2.1 The protective fencing is to be constructed of a braced scaffold framework with uprights driven into the ground to a minimum depth of 0.6m. and at no greater than 3m. spacing. On to the framework weldmesh panels such as 'Heras' or a similar product will be securely mounted with all weather notices attached reading "Keep Out – Protected Area". The fencing will form enclosed areas to which no access will be allowed.

12.3 ***Timing of fencing***

12.3.1 Protective fencing is to be erected prior to commencement of demolition works and remain in place until completion of construction. The location and suitability of the fencing can be confirmed to the local authority by an arboricultural consultant prior to commencement of construction. Any tree felling will need to be undertaken prior to fence installation to minimise risks to operatives. All tree surgeons' vehicles will be kept outside the indicated protection zones.

12.4 ***Additional precautions***

12.4.1 The storage of potentially injurious materials such as fuels, oils, chemicals and cement will be kept at least 10m. from any stem, or in a bunded storage vessel. No fires will be lit within 5m. of the drip line of any retained tree.

13. TREE PROTECTION MEASURES – GROUND PROTECTION

13.1 In areas within root protection areas where access around the new building footprints will be required during construction, specific ground protection measures will be required. These should comprise interlocking, specifically designed load bearing temporary roadway plates, commonly made of steel or specialised plastics. They will minimise any risk of compaction whilst providing a running platform for machinery.

13.2 Where foot access only is required, ground protection measures should comprise a base layer of geotextile, over which 50mm. of woodchip will be laid, topped by side butting scaffold boards or non-slip surfaced minimum 20mm. thick plywood.

13.3 Installation of the ground protection measures should take place at the same time as the protective fencing, prior to demolition, and remain in place until completion of construction.

14. SERVICES

14.1 Given the extensive road frontage it is anticipated that all services can access the site without passing within tree RPAs.

14.2 Sufficient space exists to the north of the proposals for soakaway provision within the site but still outside of indicated tree RPAs.

15. SITE OPERATIONS AND MATERIALS STORAGE

15.1 Specific details of site zoning cannot be specified by an arboriculturalist as these are commonly determined by contractors on the basis of Health & Safety Assessments. However, the robust protective fencing and ground protection measures will define the remaining site space available for storage and operations.

16. LANDSCAPING

16.1 Details of proposed landscaping will have been covered by others and are not included in this report.

17. ARBORICULTURAL METHOD STATEMENT

17.1 The Arboricultural Method Statement in Appendix 4 contains details of the measures that will need to be taken to protect retained trees during the demolition and construction phases. These are also principally covered in the above sections.

18. SUMMARY

18.1 The proposed redevelopment will require the removal of one Category B tree and a row of crowded asymmetric Category C trees. Both are TPO'd. According to BS 5837:2005 Category C trees should not represent a significant constraint to development.

18.2 The existing site constraints have restricted the impact of the proposals on trees in adjoining grounds to minimal levels.

18.3 With the past clearance and disturbance of the site, the set aside of the open area to the north for planting to improve biodiversity will be a positive use of this area over its existing condition.

18.4 The use of robust protective fencing will ensure that retained trees are not adversely affected by the proposals.

Tim Laddiman
Broad Oak Tree Consultants Ltd

TREE SURVEY EXPLANATORY SHEET

Height	in metres (estimated where ground uneven or access restricted).
Stem count	number of stems
Stem diameter (ARF)	in mm. at 1.5m. above ground level. Above Root Flare – diameter of multi-stemmed trees measured at this level.
Branch spread	radial spread in metres at four main compass points (estimated where no access).
Age class	Young - Y Middle aged - MA Mature - M Over mature - OM Veteran - V
Height of crown clearance	in metres. Normally range of heights of outer branches above ground level, e.g. 2-4m.
Physiological condition	Good, Fair, Poor, Dead
Estimated remaining contribution	in years e.g. less than 10, 10-20, 20-40, 40+
Category grading	see attached sheet
Structural condition	comment on presence of defects, decay, crown form, past management, deadwood, other features worthy of note. N.B. If trees are ivy clad, no full structural assessment will have been possible.
Preliminary management recommendations	requirements of further investigations, works necessary to alleviate potential hazards based on current setting and levels of access. NB: Works that may be necessary in relation to development are not included here

CASCADE CHART FOR TREE QUALITY ASSESSMENT

<table>
<tr><th colspan="5">TREES FOR REMOVAL</th></tr>
<tr><td>Category and definition</td><td colspan="3">Criteria</td><td>Identification on plan</td></tr>
<tr><td>Category R
Those in such a condition that any existing value would be lost within 10 years and which should, in the current context, be removed for reasons of sound arboricultural management</td><td colspan="3">• Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other R category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)
• Trees that are dead or are showing signs of significant, immediate and irreversible overall decline.
• Trees infected with pathogens of significance to the health and/or safety of other trees nearby (e.g. Dutch elm disease), or very low quality trees suppressing adjacent trees of better quality

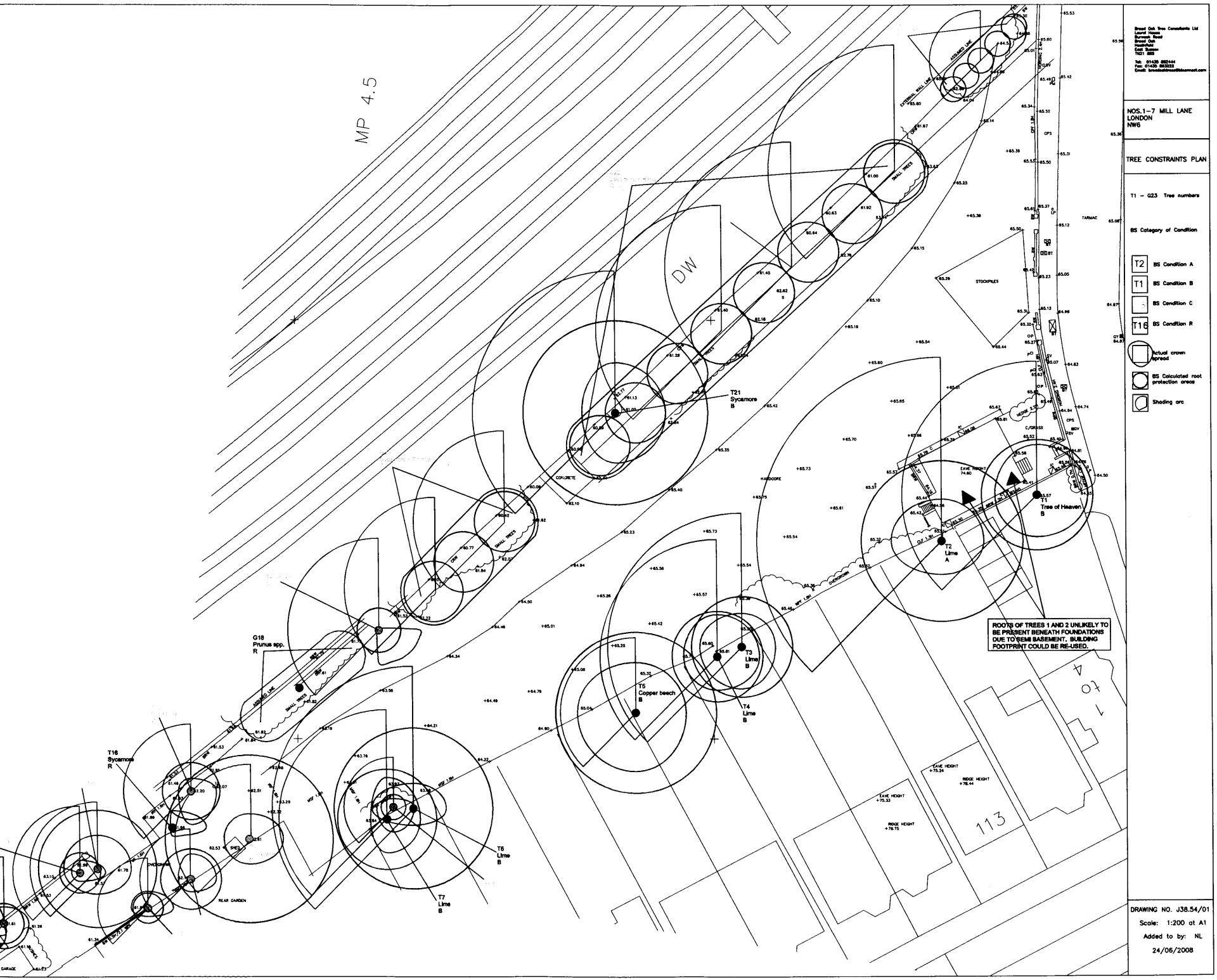
NOTE Habitat reinstatement may be appropriate (e.g. R category tree used as a bat roost: installation of bat box in nearby tree.)</td><td>DARK RED</td></tr>
<tr><th colspan="5">TREES TO BE CONSIDERED FOR RETENTION</th></tr>
<tr><td rowspan="2">Category and definition</td><td colspan="3">Criteria - Subcategories</td><td rowspan="2">Identification on plan</td></tr>
<tr><td>1. Mainly arboricultural values</td><td>2. Mainly landscape values</td><td>3. Mainly cultural values, including conservation</td></tr>
<tr><td>Category A
Those of high quality and value: in such a condition as to be able to make a substantial contribution (a minimum of 40 years is suggested)</td><td>Trees that are particularly good examples of their species, especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)</td><td>Trees, groups or woodlands which provide a definite screening or softening effect to the locality in relation to views into or out of the site, or those of particular visual importance (e.g. avenues or other arboricultural features assessed as groups)</td><td>Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood-pasture)</td><td>LIGHT GREEN</td></tr>
<tr><td>Category B
Those of moderate quality and value: those in such a condition as to make a significant contribution (a minimum of 20 years is suggested)</td><td>Trees that might be included in the high category, but are downgraded because of impaired condition (e.g. presence of remediable defects including unsympathetic past management and minor storm damage)</td><td>Trees present in numbers, usually as groups or woodland, such that they form distinct landscape features, thereby attracting a higher collective rating than they might as individuals but which are not, individually, essential components of formal or semi-formal arboricultural features (e.g. trees of moderate quality within an avenue that includes better, A category specimens), or trees situated mainly internally to the site, therefore individually having little visual impact on the wider locality</td><td>Trees with clearly identifiable conservation or other cultural benefits</td><td>MID BLUE</td></tr>
<tr><td rowspan="2">Category C
Those of low quality and value: currently in adequate condition to remain until new planting could be established (a minimum of 10 years is suggested), or young trees with a stem diameter below 150mm.</td><td>Trees not qualifying in higher categories</td><td>Trees present in groups or woodland, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit.</td><td>Trees with very limited conservation or other cultural benefits</td><td rowspan="2">GREY</td></tr>
<tr><td colspan="3">NOTE Whilst C category trees will usually not be retained where they would impose a significant constraint on development, young trees with a stem diameter of less than 150mm should be considered for relocation</td></tr>
</table>

Tree ref. no.	Species	Height (m.)	Stem count	Stem diameter (mm.)	Branch spread (m.)				Age class	Height of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading		Structural condition	Preliminary Management recommendations
					N	E	S	W								
1	Tree of Heaven	16	1	550	6	5	5	6	M	3.5+	Fair	20-40	B	2	Lower stem curved to W. Crown raised in past over building with decay of pruning wounds. No basal inspection as located on adjoining land.	
2	Lime	22	1	800	5	4	6	5	M	3+	Good	40+	A	2	Pendular fine branches below 6m. fine deadwood. No basal inspection as located on adjoining land.	
3	Lime	16	1	500	4	5	5	4	M	0+	Good	20-40	B	2	Crowded. No basal inspection as located in adjoining garden.	
4	Lime	14	1	450	5	4	4	5	M	4+	Good	20-40	B	2	Twin-stemmed at 5m. No basal inspection as located in adjoining garden.	
5	Copper beech	9	1	800	6	7	7	6	M	2+	Fair	20-40	B	2	Squat crown. Multi-stemmed from <4m.	
6	Lime	17	1	800	4	2	5	3	M	3+	Fair	20-40	B	2	Multi-stemmed from <3.5m. Lower stem leaning S. Crowded. No basal inspection as located in adjoining garden.	
7	Lime	13	1	500	4	4	2	5	M	1+	Fair	20-40	B	2	Crowded. No basal inspection as located in adjoining garden.	
8	Holly	6	2	150	2.5	3	2	1	Y	1.3+	Fair	10-20	C	1	Twin-stemmed from ground level. Crowded.	
9	Sycamore	9	Multi	1000	4	3	3	3	MA	2+	Fair	20-40	C	2	Multi-stemmed from ground level. Base mostly located in adjoining garden.	

Tree ref. no.	Species	Height (m.)	Stem count	Stem diameter (mm.)	Branch spread (m.)				Age class	Height of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading		Structural condition	Preliminary Management recommendations
					N	E	S	W								
10	Pear	6	1	300	3	1.5	1.5	3	M	3+	Poor	10-20	C	1	Dieback in crown. No basal inspection as located in adjoining garden.	
11	Pear	6	1	150	3	1	2	2	Y	2+	Fair	20-40	C	2	Located in adjoining garden, so no basal inspection.	
12	Sycamore	8	1	170	2	0	2	4	Y	2+	Fair	20-40	C	2	Natural regeneration. Growing against wall.	
13	Sycamore	8	1	200	3	3	3	2	Y	3+	Fair	10-20	C	2	Natural regeneration. Growing against wall. Basal wound to S with decay.	
14	Sycamore	8	1	200	3	1	1	1.5	Y	3+	Poor	10-20	C	1	Crowded. Cut back and crown raised in past. Natural regeneration. Growing against wall.	
15	Sycamore	8	Multi	700	4	3	4	4	MA	2+	Fair	10-20	C	2	Five stems from <1m. Pooled join with localised decay. Crown reduced in past.	
16	Sycamore	8	1	260	4	1	0	2	Y	4+	Poor	<10	R		Twin-stemmed at 1.1m. with weak join. Stem curved to N.	Fell.
17	Sycamore	8	2	340	3	4	1.5	1.5	MA	3+	Fair	20-40	C	2	Twin-stemmed at 1.5m. Crown reduced in past.	
G18	Prunus spp.	<7	Multi	<300	<3	<3	<3	<3	MA	2+	Poor	<10	R		Cluster of poorly formed trees, mostly curved to N. Dieback.	Fell all.
19	Sycamore	11	1	220	5	4	0	0	Y	3+	Poor	20-40	C	1	Previously crowded. No basal inspection due to dangerous access.	

Tree ref. no.	Species	Height (m.)	Stem count	Stem diameter (mm.)	Branch spread (m.)				Age class	Height of crown clearance (m.)	Physiological condition	Estimated remaining contribution (years)	Category grading		Structural condition	Preliminary Management recommendations
					N	E	S	W								
G20	Sycamore + Prunus	<11	1	<300	<4	<4	<4	<4	Y	2+	Poor	10-20	C	1	Dense linear group of natural regeneration. Ivy clad and no basal inspection due to dangerous access. All asymmetric with crowns over railway. Cherries leaning heavily.	Coppice all.
21	Sycamore	17	Multi	1100	6	6	4	6	M	3+	Good	20-40	B	2	Multi-stemmed from ground level. No basal inspection due to dangerous access.	
G22	Sycamore + Birch	<15	1	<300	<4	<4	<4	<4	MA	2+	Poor	10-20	C	1	Dense linear group of asymmetric trees, mostly developed over railway. Several birches snapped and lower stem wounding on several sycamores.	Consider coppicing all.
G23	Ash/willow	<6	Multi	<150	<2	<2	<2	<2	Y	0+	Poor	20-40	C	1	Dense group of natural regeneration.	

APPENDIX 2



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NOS.1–7 MILL LANE
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TREE CONSTRAINTS PLAN

T1 – G23 Tree numbers

BS Category of Condition

- T2 BS Condition A
- T1 BS Condition B
- BS Condition C
- T16 BS Condition R

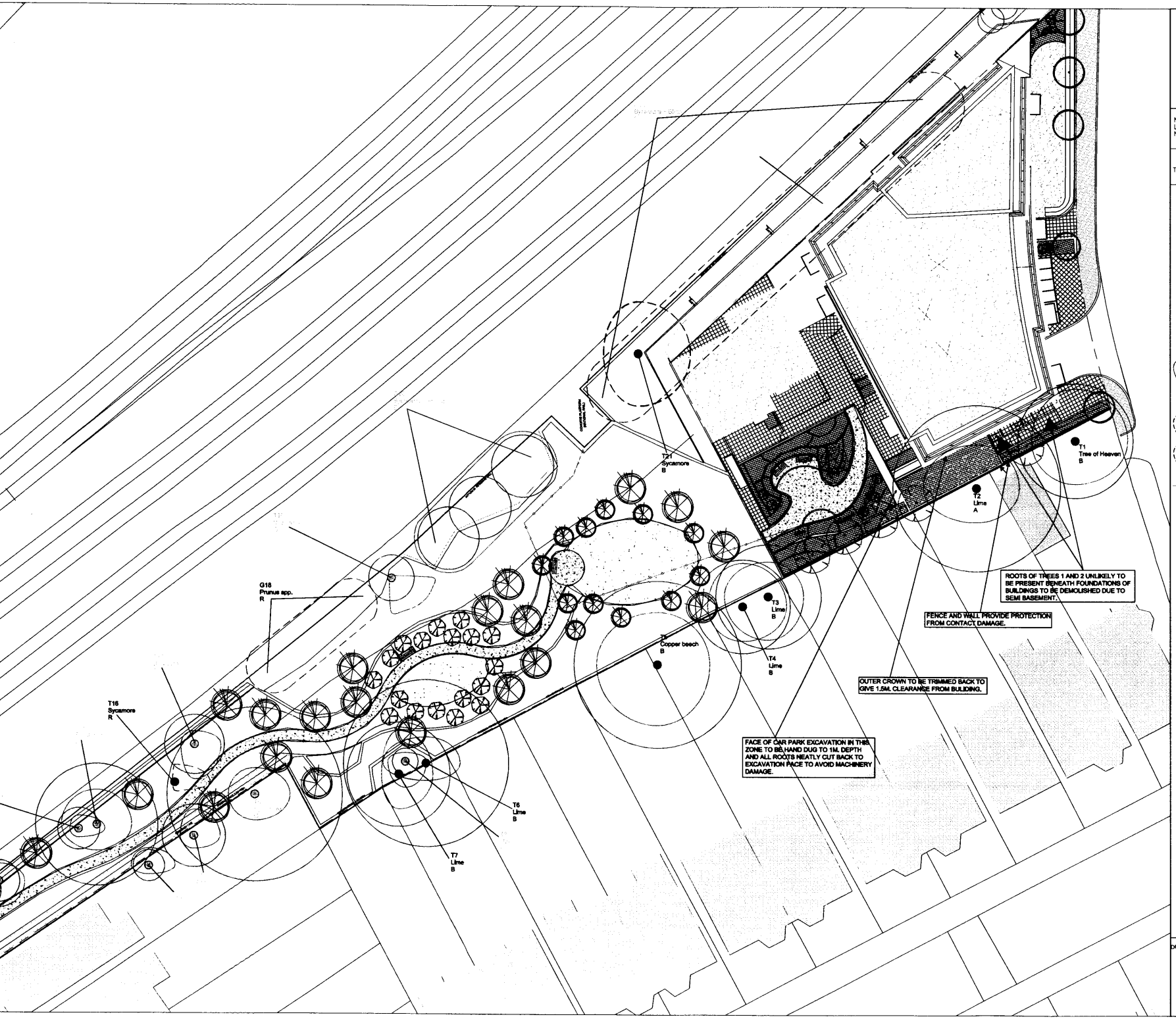
Actual crown spread

BS Calculated root protection areas

Shading arc

DRAWING NO. J38.54/01
Scale: 1:200 at A1
Added to by: NL
24/06/2008

APPENDIX 3



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NOS.1-7 MILL LANE
LONDON
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TREE PROTECTION PLAN

T1 - G23 Tree numbers

BS Category of Condition

- T2 BS Condition A
- T1 BS Condition B
- BS Condition C
- T16 BS Condition R
- Actual crown /spread
- BS Calculated root protection areas
- Tree for removal /for development
- Tree for removal /for development
- Protective fencing location
- Ground protection measures
- Hand dig zone

TREE PROTECTION INFORMATION

DRAWING NO. J38.54/02 Rev B
Scale: 1:200 at A1
Added to by: NL
21/07/2008

APPENDIX 4

ARBORICULTURAL METHOD STATEMENT FOR TREE PROTECTION AT NOS. 1-7 MILL LANE, LONDON NW6

1. GENERAL

This statement sets out the methodology for proposed works with the potential to affect trees on and adjacent to the site. Compliance with this Method Statement will be a requirement of all relevant contracts associated with the development proposals. The documents to be referred to in conjunction with this statement are as follows:

- Arboricultural Implications Assessment for Proposed Redevelopment dated 22nd July 2008, hereafter referred to as "the Report".
- Broad Oak Tree Consultants Ltd.'s drawing no. J 38.54/02 Rev B – Tree Protection Plan, hereafter referred to as "the Plan".

2. ARBORICULTURAL WORKS

- Trees for removal are indicated with dashed outlines on the Plan. No other trees are to be removed without reference to the arboricultural consultant. Details of tree surgery requirements are included in Section 11 of the Report. For reasons of operator safety it is recommended that all tree clearance and tree works recommended in the Report are undertaken prior to site clearance and erection of protective fencing.

- An appropriately qualified and insured tree surgery company will undertake all recommended felling and tree surgery works to the requirements of BS 3998:1989 "Recommendations for Tree Work".

- No fires or chip piling to occur within 5m. of the drip line of any tree canopy or within 10m. of any tree stem, whichever is the further.

- Stumps of all trees within 15m. of retained trees to be ground out using pedestrian guided wheeled/tracked grinding machines.

- Prior to tree surgery/felling works commencing, the trees for works should be checked for the presence of nesting birds or bats. Disturbance of nesting birds or bats could represent an offence and result in prosecution under the Wildlife and Countryside Act 1981.

3. TREE PROTECTION MEASURES

Location of fencing

Protective fencing to be erected at indicated locations on the Plan. Fencing to produce enclosed zones around individual or linear runs of trees.

Timing of fencing

Protective fencing is to be erected once arboricultural works have been completed and prior to site clearance commencing. The location and appropriateness of the fencing will be confirmed to the Local Authority by the arboricultural consultant. All fencing will remain in place until completion of construction and any hard landscaping.

Design of fencing

The protective fencing is to comply with Section 9 and Figure 2 of BS 5837:2005. Fencing will be constructed of a braced scaffold framework with uprights driven into the ground to a minimum depth of 0.6m. and at no greater than 3m. spacing. On to the framework, weldmesh panels such as "Heras" or a similar product will be securely mounted with all-weather notices attached to every fifth panel, reading "Keep Out – Protected Area". The fencing will form enclosed areas to which no access will be allowed.

4. GROUND PROTECTION MEASURES

To allow for safe working space around the building, it will be necessary for the set back of fencing to occur where indicated by hatching on the Plan. This will be to the specification outlined in Section 9.3 and Figure 3 of BS 5837:2005 and is for foot access only. The measures will comprise a base layer of geotextile, over which a 50mm. layer of woodchip will be spread, with a top layer of side butting scaffold boards. This will act as a load bearing surface for foot passage without causing compaction damage to underlying roots.

If machinery access is required, ground protection will comprise interlocking plates made of steel or other specifically designed material to form a load bearing running surface for vehicles.

Ground protection measures will be installed prior to commencement of site clearance and remain in place until completion of construction.

5. GENERAL PRECAUTIONS

The storage of potentially injurious materials such as fuels, oils, chemicals and cement will be kept at least 10m. from any stem or in a bunded storage vessel. No changes in level will occur, either increases or decreases within the protective fencing areas.

6. INSTALLATION OF SERVICES

Service runs will enter the properties using junctions from existing services where at all possible and located outside the protective fencing areas. If incursion into the protective areas is unavoidable, then the routing should be obtained either by thrust boring or hand excavation, supervised by the arboricultural consultant. Any works within the protective areas will need to be undertaken to the requirements of NJUG Volume 4 "Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees"

7. HAND DIG OF EXCAVATION IN PROXIMITY TO TREE NO. 2

Where indicated on the Plan the upper 1m of the excavation face for the basement car park will be undertaken by hand. All roots encountered will be cleanly cut back to the excavation face using sharp secateurs/loppers to minimise the exposed wound area and avoid tearing by machinery buckets.

8. ARBORICULTURAL SUPERVISION OF WORKS

An arboricultural consultant will undertake monthly inspections of the site and produce a written statement to the Council's Trees Officer confirming the condition of the site and protective measures, any reportable infringements of protection areas and details of any mitigation measures necessary. Monitoring will continue until construction and the soft landscaping have been completed.

In addition, the arboricultural consultant will provide confirmation of completion in compliance with this Method Statement of the following works:

- Location and design of protective fencing.
- Tree removal and tree surgery works detailed in the Report.
- Location and design of ground protection measures.

The following works will require on site supervision by the arboricultural consultant:

- Any hand trenching of services within indicated tree root protection areas.
- Hand digging of excavation in proximity to tree no. 2

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